

Education Based on Theory of Planned Behavior over Sexual Function of Women with Breast Cancer in Iran

Zeinab Jalambadani, Gholamreza Garmaroudi, Mahmood Tavousi

Department of Public Health, Neishabur University of Medical Sciences, Neyshabur, Iran



Corresponding author: Zeinab Jalambadani, PhD

Department of Public Health, Neishabur University of Medical Sciences, Neyshabur, Iran

Tel: 433444011, Fax: 43334080

E-mail: jalambadaniz@gmail.com

Received: June 11, 2017, Accepted: September 05, 2017

ABSTRACT

Objective: Sexual function in patients with breast cancer, especially in younger patients, is an important issue from clinical and psychosocial perspectives. Theory of planned behavior (TPB) is one of the important theories that explain the main process of adopting healthy behaviors. This study investigated the effect of education based on TPB on sexual function of women with breast cancer in Mashhad, Iran. **Methods:** In this quasi-experimental study, 120 women (60 women in education group, 60 women in control group) visiting Razavi Hospital of Mashhad city were studied, selected by using the random method in 2016. The data collection tool was a questionnaire which was completed during the interview. The validity and reliability of this questionnaire were determined through the face and content validity and through Cronbach's alpha and test-retest, respectively. **Results:** Data were analyzed using statistical SPSS 22 software.

Using linear regression analysis, it was determined that attitudes, subjective norm, and perceived behavioral control (PBC) predict 0.85 overall of the total variance of sexual function intention, which among these variables, the effect of the subjective norm was more than the other ones ($P < 0.05$). After educational intervention, the average rates of knowledge, attitude, PBC, and intention of sexual function in sex education group were significantly increased ($P < 0.05$); these changes were not meaningful in the control group. There was no statistically significant difference in subjective norm between the two groups after intervention. **Conclusions:** The results of this research suggest that TPB can be used in sex education interventions and have relevant results.

Key words: Breast cancer, sex education, theory of planned behavior

Introduction

Research shows that sexual inadequacies are closely associated with social problems such as crime, sexual

assault, mental illness, and divorce.^[1] Although serious illness in either partner can disrupt a sexual and intimate

Access this article online

Quick Response Code:



Website: www.apjon.org

DOI:
10.4103/apjon.apjon_67_17

This is an open access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as the author is credited and the new creations are licensed under the identical terms.

For reprints contact: reprints@medknow.com

Cite this article as: Jalambadani Z, Garmaroudi G, Tavousi M. Education Based on Theory of Planned Behavior over Sexual Function of Women with Breast Cancer in Iran. *Asia Pac J Oncol Nurs* 2018;5:201-7.

relationship, breast cancer can cause unique problems such as anxiety and depression, which can also impact sexuality.^[2,3] Certain side effects of treatment can also impact sex life. For example, hormone therapy may cause a loss of desire as well as vaginal changes that can make intercourse painful. However, the desirable sexual function is a factor to strengthen family and a foundation to obtain and stabilize a consistent culture. Possibly, couples having sexual inadequacies are themselves unaware of its effect on marital life problems and its role in building poor communication, low self-confidence, and depression in themselves, and their spouses.^[2]

In Iran, according to a national survey, 31.15% of women had sexual dysfunction.^[4] There is also evidence of a high prevalence of sexual dysfunction following treatment for breast cancer; in one survey, this association was found in 45% of women.^[5] In many studies, the most common sexual disorders in women were reported to include impaired desire, arousal, lubrication, orgasm, satisfaction and pain, body image, psychological health, and sensuality. In Saudi Arabia, the international agency for research on cancer estimated that the age-standardized incidence rate for breast cancer was 22.4/100,000 women and the age-standardized mortality rate was 10.4/100,000 women. Regardless of the numbers, percentages, and statistics, the diagnosis of breast cancer has a dramatic impact on the patient's life. Moreover, breast cancer and its subsequent treatment have been shown to have a significant influence on women's sexual function.^[6] In one study that included 83 breast cancer survivors (all of whom had completed 3 or more years after diagnosis) surveyed using the female sexual function index (FSFI) and the female sexual distress scale-revised, 77% qualified for the diagnosis of sexual dysfunction on the FSFI alone.^[7] In the United States, breast cancer is the most common cancer in women, regardless of race or ethnicity.^[8]

To develop a sexual health education program, it is essential to pay attention to particular aspects of culture, religion, laws, norms, and prevailing values in the society and families. Media, the appropriate message and the appropriate message transmitter, is also very important for the success of every educational program.^[9] Several models of female sexual function have been characterized in the studies.^[8] Theory of planned behavior (TPB), which was developed by Ajzen and Fishbein in 1980, is widely used in different populations for health. TPB has five constructs: (1) attitude, (2) subjective norm, (3) perceived behavioral control (PBC), (4) intention, and (5) behavior.^[10,11] This theory posits that intention is the main precursor to behavior. The TPB claims that attitude (the degree a person has a favorable or unfavorable evaluation toward the behavior), subjective norm (normative influences; the

perceived social pressure to perform or not perform the behavior), and PBC (the individual's perceptions of the ease or difficulty of performing the behavior of interest) predict intention. PBC influences intentions and directly affects behavior.^[12] No study so far has reported on sex education based on TPB and effect on the sexual function of women with breast cancer in Iran. Breast cancer patients in Iran are usually younger than their western counterparts, and thus, might report different experiences. In addition, women in Islamic countries such as Iran usually have reservations in talking about and reporting sexual problems or seeking professional help.^[13]

Thus, the current research has been carried out with the aim to assess the effect of education based on TPB on sexual function of women with breast cancer visiting Razavi Hospital of Mashhad city in Iran. In addition, information for implementing possible future interventions were collected in order to improve quality of life in breast cancer patients.

Methods

Samples

The sample size was calculated using the formula for the quasi-experimental survey,^[14] using a margin of error = 0.05 and = 10%, an expected power of 90%, a $Z = 1.28$. The sample included 120 women (60 women in education group, 60 women in control group) who were selected from the Razavi Hospital in Mashhad, Iran through random sampling. Patients were included in the study if they had a confirmed diagnosis of breast cancer (any stage); were Iranian, married, and sexually active; and did not experience certain circumstances which hinder them from regular intercourse (psychological disease). Patients were assessed after surgery and completion of adjuvant treatment (usually 3 months after chemotherapy or radiotherapy).

The exclusion criteria included an incomplete questionnaire, not participating in training sessions, or presence of psychological disease. The questionnaire was filled in a quiet room in the Razavi hospital.

All the participants provided informed consent to be involved in the study.

Measure tools

All questionnaires had content validity index and content validity ratio values higher than 0.75 and 0.62, respectively. Face validity was considered to be suitable with respect to 18 expert panel members. Test-retest for external consistency was done with 20 women in the Razavi hospital. Cronbach's alpha was used for internal consistency. The data collection tools of the multiple-choice

questionnaire included demographic data (13 questions), knowledge (21 questions), dimensions of the TPB including attitude (12 questions), subjective norm (8 questions), PBC (6 questions), behavioral intention (3 questions), and sexual function (19 questions).

Knowledge

This section included 21 questions about sexual function, including four multiple-choice and 17 questions true and false ones. The scores of 1 and 0 were assigned to true and false responses, respectively; for instance, one of the four multiple-choice questions was “Which part of the women genital is more sensitive to sexual stimulation than others?” Furthermore, a sample of true and false questions is as follows: “If appropriate stimulation be done, are women able to experience orgasm during intercourse?”

The items had high external consistency (Cronbach’s alpha = 0.93).

Attitude

The indirect attitude scale was composed of 12 items, and assessed^[1] behavioral beliefs by six 5-point items ranging from “disagree strongly” to “agree strongly” (–2 to +2) and (2) outcome evaluations by six 5-point items ranging from “not at all” to “very much” (+1 to + 5). The items had high internal consistency (Cronbach’s alpha = 0.85).

Subjective norm

The indirect subjective norm scale was composed of 8 items, and assessed (1) normative beliefs according four 5-point items ranging from “disagree strongly” to “agree strongly” (–2 to +2) and (2) motivation to comply by four 5-point items ranging from “not at all” to “very much” (+1 to +5).

Once multiplied together, possible indirect subjective norm scores ranged from –8 to +40, and the items had high internal consistency (Cronbach’s alpha = 0.80).

Perceived behavioral control

The indirect PBC scale was composed of six items, and assessed the control beliefs and their perceived power of the behavior by three 5-point items ranging from “disagree strongly” to “agree strongly” (–2 to +2) and three 5-point items ranging from “not at all” to “very much” (+1 to +5). The items had moderate internal consistency (Cronbach’s alpha = 0.79).

Intention

The intention scale was composed of three items, and was measured as the sum of three 5-point items (+1 to +5) that assessed intention to have sexual function in the future ranging from “not at all” to “very much” (e.g. “I intend to always achieve orgasm during vaginal sex with my partner during the next months”). The items had moderate internal consistency (Cronbach’s alpha = 0.70).

Sexual function

This scale had 19 items; the index of sexual functioning for women (Rosen R, Brown C, *et al.*, 2000) is a 19-item self-report inventory that measures current levels of sexual functioning and satisfaction in women (Cronbach’s alpha = 0.90).

Educational intervention

Participants were assigned to either the education group or the control group. The educational needs of the groups were determined. Each group met for 60 min, twice weekly, for 12 weeks. One month was set aside for completion of the survey (preintervention and postintervention). The curriculum focused on the subjective norm, PBC, attitude, intention, and behavior [Table 1].

Statistical analysis

After collecting data, the questionnaires were encoded, and data entered into the computer, and the analysis was carried

Sessions	Educational content	Method of training
First	Discussed on the human sexual anatomy Discussion and exchange of ideas. Determine positive opinions and attitudes of individuals so that it can indirectly provide positive motivation for them to talk about their sexual affairs with spouse, to make new attitudes, and to change negative attitude toward intercourse	Lecture - Group Discussion - Role Playing. One booklet (include stages of sexual function) and two education leaflets (include sexual diseases, sexual orientation)
Second	Discussed on emotional relations and responsibilities, sexual activity, sexual production, age of consent, process of sexual function were explained by displaying training slides and to be tried to make more motivation for marital relationship, based on being necessary for intercourse, with emphasis on satisfactory one, and were followed by 30 min discussion with women on hardness and easiness of intercourse; also, common beliefs and misconceptions about sexual relationship were discussed within 60 min so that the intensity of these misconception would be reduced and the ground be prepared for attitude and belief change	
Third	Discussed on reproductive health, reproductive rights, safe sex	
Fourth	Birth control and sexual abstinence were explained	

out using SPSS version 22 software (IBM SPSS Statistics for Windows, Armonk, NY: IBM Corp. Released 2013), Spearman's correlation coefficient tests, and linear regression analysis. Descriptive statistics including mean and deviation frequency were used to describe demographic information of research samples. Independent samples *t*-test, Mann-Whitney U-test, and Chi-square test were used for the homogeneous test. The correlation coefficient of Pearson and Spearman and linear regression were used to determine the correlation between TPB variables and to determine the predictive power TPB variables, respectively. The level of significance of $P < 0.05$ was considered for all tests.

Results

The study results have been expressed in three sections including demographic variables, predictors of intention of having intercourse, and constructs of the TPB before and after training, in the groups of sex education and control.

Before training in two groups of test and control, Mann-Whitney U-test did not show any statistically meaningful difference in terms of age or marriage age [Table 2]. Marriage duration, the number of children, income status, and the oldest and youngest child were also not significantly different [Table 3].

The majority of sex education and control groups had university (42.5%) and high school (37.5%) degrees, respectively, and the education level of husbands in sex education and control groups were high school (50%) and university degrees (40%), respectively.

The job for the majority of research units in both groups was homemaker (70%). The husband's job in sex education

and control groups was freelance (52.5%). The income of the majority of research units (90%) was enough. The majority of research units (66.3%), in terms of housing status, had a personal home.

Table 4 displays the Spearman's correlation coefficient among TPB variables, intention, attitude, subjective norm, and PBC. As shown, all the components of the TPB correlated significantly with behavioral intention.

Subjective norm ($r = 0.78, P < 0.01$) was significantly and strongly correlated followed by the PBC ($r = 0.61, P < 0.01$) and attitude ($r = 0.69, P < 0.01$). Since they correlated positively an increase in the value of one, TPB component was accompanied by an increased intention to sexual function. However, knowledge did not correlate significantly with any of the TPB components. Table 5 shows that linear regression analysis, attitude variables, subjective norms, and PBC predicted 0.85 overall of the variance of having intentions of sex that the effect of subjective norms among these variables was more than other variables. Table 6 shows that the average rates of knowledge, attitude, PBC, intention, sexual function in the education group was increased meaningfully ($P < 0.05$); however, these changes were not meaningful in the control group. There was also no statistically meaningful difference in subjective norms between the two groups after intervention ($P > 0.05$).

Discussion

This was a quasi-experimental study that used TPB and education intervention based on variables of this theory, with the general aim of determining the effect of sex education based on TPB on sexual function of women visiting Razavi Hospital in Mashhad, Iran. The results show that all attitude variables, subjective norm, and PBC can explain the intention of having sex, and that subjective norm had the greatest predictive power among these variables. The results of the study are consistent with those of the following studies. In a study by Refaie Shirpak *et al.*,^[15] Nikpoore^[16] and Rahimi *et al.*,^[17] after cognitive-behavioral counseling, the knowledge, attitude and self-confidence of the intervention group were

Table 2: Mean age, marriage age in sex education and control groups before of education

Variables	Mean±SD		Independent-samples <i>t</i> -test
	Sex education	Control	
Age (year)	10.53±45.75	10.77±46.35	$t=0.272, P=0.802, df=60$
Marriage age (year)	4.56±21.15	6.47±21.18	$t=0.22, P=0.989, df=60$

SD: Standard deviation

Table 3: Median duration of marriage, the number of children, income status, the age of the oldest and youngest child, in two groups of sex education and control before training

Variables	Median (interquartile range)		Mann-Whitney U-test
	Sex education	Control	
Marriage duration (years)	16.00 (23.00)	11.00 (30.75)	$Z=0.61, P=0.70$
Number of children	3.000 (2.00)	2.00 (2.75)	$Z=0.08, P=0.97$
Oldest child age (years)	11.00 (33.00)	11.5 (32.000)	$Z=0.31, P=0.93$
Youngest child age (years)	1.00 (23.00)	1.00 (22.00)	$Z=0.214, P=0.95$
Income status (Rials)	5,000,000 (200,000)	6,000,000 (500,000)	$Z=0.53, P=0.76$

Table 4: Correlations among the components theory of planned behavior, knowledge, intention, attitude, subjective norms, perceived behavioral control, sexual function

Variables	Knowledge	Attitude	Subjective norms	Perceived behavioral control	Intention	Sexual function
Knowledge	-					
Attitude	0.053	-				
Subjective norms	0.44	0.78*	-			
Perceived behavioral control	0.04	0.28*	0.61**	-		
Intention	0.051	0.39**	0.56**	0.41**	-	
Sexual function	0.022	0.69**	0.78**	0.61**	0.01	-

**P<0.01, *P<0.05

Table 5: Linear regression of intention on knowledge, attitude, subjective norms, and perceived behavioral control

Variables	β	P	R ²
Subjective norms	0.78	0.001*	0.85
Attitude	0.59	0.18	
Perceived behavioral control	0.46	0.10	
Knowledge	0.35	0.10	

*P<0.05

significantly different from those of the preintervention and control group.^[15-17] That is, sex education had no meaningful statistical difference in the score of subjective norms of the sex education group. However, in the study by Larki, there was a significant difference between the mean score of the subjective norm for abstinence from high-risk sexual behaviors in female prisoners.^[118] Therefore, the spending of more time providing training and education about the sexual function may be required for the increase of the score of subjective norm. Alternatively, it may be necessary that other concerned persons (such as the relevant spouses of the studied group) receive training sessions on subjective norms as well.

Sex education had a meaningful statistical difference in the score of self-efficacy of the sex education group. The results of the current study are not consistent with those of the study by Kinsler, wherein, there was no statistically significant difference between self-efficacy, with behavioral intention and behavior, than the relationship of other constructs.^[19]

There has been no provision of sex education for any of the age groups in Iran, and thus, the knowledge level of different population groups about sexual health, scientific, and authentic issues related to sexual affairs is not high enough.^[20] This is probably due to less involvement of studied group in the learning process, less self-originating in spouses, and use of inactive learning methods, such as in the study by Ahmadi.^[20]

In marital life, there are beliefs that are true, and there is no evidence to support them. These strongly-held beliefs create expectations that prevent spouses from achieving

their goals, put their sexual health in danger, and become the main reason behind many conflicts, especially between spouses.^[21,22] The results of the current study indicate that the score of PBC after intervention in the sex education group was significantly different from the score before the intervention, and this score was not meaningful in the control group. In the current study, PBC and the feeling of having the will and control over doing the behavior are important factors to start having sexual function in the sex education group and increase of that followed by intervention indicated the effect of education on rising PBC. The results of the study are consistent with the study of Omer and Haidar.^[23] The results of the current study indicate that the score of behavioral intention after intervention in the sex education group had a significant difference compare to that of the score before the intervention, and this score was not meaningful in the control group. Hence, sex education caused an increase of behavioral intention in the experimental group. According to this, whenever women acquire enough knowledge along with positive attitude toward sexual function and if women feel that environmental factors (facilities and barriers) are in their own willpower, they will be full of intention about sexual function and if intention is expressed properly, they will have better sexual function have stated that there is a correlation between attitude and behavioral intention and subjective norms and the intentions of safe sexual behavior as well.^[24,25] The score of sexual function after intervention in the sex education group had a meaningful difference compared to that of the score before intervention in the same group, and this score was not meaningful in control group. In the study by Hoyer, cognitive-behavioral training showed a decrease in sexual function disorder, which is consistent with the current study.^[26]

Conclusion

Breast cancer patients might show deterioration in sexual function over time. Sexual dysfunction disorders have become an evident challenge for patients among this population. Addressing sexual concerns is, in turn,

Table 6: The comparison among the average of studied variables in group of education and control, before and after intervention

Variables	Groups (mean±SD)						Test
	Sex education			Control			
	Before	After	P	Before	After	P	
Knowledge	4.92±16.25	4.89±18.55	0.001	4.19±16.47	4.08±16.72	0.09	P=0.003, t=3.10
Attitude	6.92±23.32	16.34±29.35	0.02	6.46±21.70	16.98±22.80	0.62	P=0.02, t=2.17
Subjective	11.77±16.02	12.54±19.12	0.27	10.35±19.12	10.84±18.97	0.93	P=0.824, t=0.06
Intention	3.42±3.05	2.87±4.10	0.029	3.44±3.15	3.17±3.17	0.96	P=0.03, t=2.03
PBC	22.50 (17.50)	7.00 (24.00)	0.001	20.00 (19.00)	20.00 (9.00)	0.904	P=0.002, z=-5.05
Function	4.42 (28.25)	8.25 (30.45)	0.013	3.67 (28.75)	4.65 (28.00)	0.051	P=0.003, z=-2.96

PBC: Perceived behavioral control, SD: Standard deviation

becoming an apparent necessity in managing the care of patients with breast malignancies.

Limitations

The first limitation of this study is the sample structure which was limited to women with breast cancer and did not study healthy women with these problems. The data obtained from this study should be interpreted with caution since they reflect the limited methodology with which the research was conducted. The sample seems to be small and not representative enough to allow us to extrapolate the data for a larger population. The second limitation of this study is the missing role of husband/partner in the study which can have a very important role in patient life. Among the major challenges existing in clinical practice is the barrier to communication regarding such issues involving both the physician and patient. For instance desire for sex by women (asking or showing interest in sex) is perceived negatively and men must always initiate; or the husband’s preferences and satisfaction are more important than the wife’s satisfaction, and thus if husbands were satisfied, women tend to show that they are also satisfied.^[27]

The lack of a secure environment in the hospital to discuss sexual problems with patients is also a limitation. It is also necessary to promote understanding about sexual issues among healthcare providers in general as well as increasing the number of sex therapists and counselors.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Reese JB, Sorice K, Beach MC, Porter LS, Tulsy JA, Daly MB, *et al.* Patient-provider communication about sexual concerns in cancer: A systematic review. *J Cancer Surviv* 2017;11:175-88.
2. Maiorino MI, Chiodini P, Bellastella G, Giugliano D, Esposito K. Sexual dysfunction in women with cancer: A systematic review with meta-analysis of studies using the

- Female Sexual Function Index. *Endocrine* 2016;54:329-41.
3. Kaviani M, Rahnavard T, Azima S, Emamghoreishi M, Asadi N, Sayadi M, *et al.* The effect of education on sexual health of women with hypoactive sexual desire disorder: A randomized controlled trial. *Int J Community Based Nurs Midwifery* 2014;2:94-102.
4. Fahami F, Savabi M, Mohamadirizi S. Relationship of sexual dysfunction and its associated factors in women with genital and breast cancers. *Iran J Nurs Midwifery Res* 2015;20:516-20.
5. Kedde H, van de Wiel HB, Weijmar Schultz WC, Wijzen C. Sexual dysfunction in young women with breast cancer. *Support Care Cancer* 2013;21:271-80.
6. Almutairi KM, Mansour EA, Vinluan JM. A cross-sectional assessment of quality of life of breast cancer patients in Saudi Arabia. *Public Health* 2016;136:117-25.
7. Raggio GA, Butryn ML, Arigo D, Mikorski R, Palmer SC. Prevalence and correlates of sexual morbidity in long-term breast cancer survivors. *Psychol Health* 2014;29:632-50.
8. Boswell EN, Dizon DS. Breast cancer and sexual function. *Transl Androl Urol* 2015;4:160-8.
9. Charalambous A, Kaite CP, Charalambous M, Tistsi T, Kouta C. The effects on anxiety and quality of life of breast cancer patients following completion of the first cycle of chemotherapy. *SAGE Open Med* 2017;5:2050312117717507.
10. St. Lawrence JS, Montañó DE, Kasprzyk D, Phillips WR, Armstrong K, Leichliter JS. STD screening, testing, case reporting, and clinical and partner notification practices: A national survey of US physicians. *Am J Public Health* 2002;92:1784-8.
11. Kautonen T, Gelderen M, Fink M. Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. *Entrep Theory Pract* 2015;39:655-74.
12. Ajzen I, Sheikh S. Action versus inaction: Anticipated affect in the theory of planned behavior. *J Appl Soc Psychol* 2013;43:155-62.
13. Ghaffari M, Gharlipour Gharghani Z, Mehrabi Y, Ramezankhani A, Movahed M. Premarital sexual intercourse-related individual factors among Iranian adolescents: A Qualitative study. *Iran Red Crescent Med J* 2016;18:e21220.
14. Araoye MO. *Research Methodology with Statistics for Health and Social Sciences*. Ilorin: Nathadex Publisher; 2003. p. 115.
15. Shirpak KR, Kaviani M, Maticka-Tyndale E, Ardebili HE, Pourreza A, Ramenzankhani A. Sex education in women referred to health centers in Tehran. *Payesh* 2007;6:243-56.
16. Nikpour M, Delavar M, Abedian Z. Type of delivery and

- self-reported postpartum symptoms among Iranian women. *Clin Exp Obstet Gynecol* 2013;40:144-7.
17. Rahimi E, Shafiabady A, Yonesy F. The effect of sexual cognitive-behavioral therapy on females' sexual knowledge, sexual attitude, and sexual self-confidence. A case study in Shiraz, Iran. *Armaghan Dnesh* 2009;14:103-11.
 18. Larki M, Taffazoli M, Latifnejad-Roudsari R, Shakeri MT, Babae A. The Effect of a Training Program Based on the Theory of Planned Behaviour (TPB) on Sexual High-Risk Behavioural Intentions in Female Prisoners, Vakil Abad Prison, Mashhad, Iran, 2013. *J Kerman Univ Med Sci* 2016;23:497-514.
 19. Kinsler J, Sneed CD, Morisky DE, Ang A. Evaluation of a school-based intervention for HIV/AIDS prevention among Belizean adolescents. *Health Educ Res* 2004;19:730-8.
 20. Ahmadi Tabatabaei S, Taghdisi MH, Nakhaei N, Balali F. Effect of educational intervention based on the theory of planned behaviour on the physical activities of Kerman Health Center's Staff (2008). *J Babol Univ Med Sci* 2010;12:62-9.
 21. Addis J, Bernard ME. Marital adjustment and irrational beliefs. *J Ration Emot Cogn Behav Ther* 2002;20:3-13.
 22. Epstein N. Cognitive marital therapy. *J Ration Emot Cogn Behav Ther* 1986;4:68-81.
 23. Omer S, Haidar J. Applicability of the theory of planned behavior in predicting intended use of Voluntary HIV Counseling and Testing services among teachers of Harari Region, Ethiopia. *Ethiop J Health Dev* 2010;24:96-102.
 24. Rye BJ, Fisher W, Fisher J. The theory of planned behavior and safer sex behaviors of gay men. *AIDS Behav* 2001;5:307-17.
 25. Villarruel AM, Jemmott JB 3rd, Jemmott LS, Ronis DL. Predictors of sexual intercourse and condom use intentions among Spanish-dominant Latino youth: A test of the planned behavior theory. *Nurs Res* 2004;53:172-81.
 26. Hoyer J, Uhmman S, Rambow J, Jacobi F. Reduction of sexual dysfunction: By-product of cognitive-behavioural therapy for psychological disorders. *Sex Relationsh Ther* 2009;24:64-73.
 27. Moghassemi S, Ziaei S, Haidari Z. Female sexual dysfunction in Iranian postmenopausal women: Prevalence and correlation with hormonal profile. *J Sex Med* 2011;8:3154-9.